



Public Services

Engineering
212 Operations Center Drive
Wilmington, NC 28412
910 341-7807
910 341-5881 fax
wilmingtonnc.gov
Dial 711 TTY/Voice

May 24, 2019

Mark Maynard, Manager
Elevation Apartments, LLC & Remarkable Properties, LLC
10 South Cardinal Drive
Wilmington, NC 28403

**Subject: Stormwater Management Permit No. 2013018R2
Evermore Apartments (Expansion & Rainbow Square)
High Density**

Dear Mr. Maynard:

The City of Wilmington Engineering Division has received a request for a revision to the Stormwater Management Permit for Evermore Apartments (Expansion & Rainbow Square). Having reviewed the application and all supporting materials, the City of Wilmington has determined that the proposed revision meets the requirements of the City of Wilmington's Comprehensive Stormwater Ordinance.

The revisions include:

The expansion of Evermore Apartments with stormwater treatment provided by means of Pervious Concrete, modifications can be found on Issued for Construction Plans dated May 24, 2019. Rainbow Square has been included as part of the Evermore Apartments expansion and is considered redevelopment by means of impervious surface reduction, modifications can be found on Issued for Construction Plans dated May 16, 2019.

Please be aware all terms and conditions of the permit 6/12/13 remain in full force and effect. Any additional changes to the approved plans must be approved by this office prior to construction. The issuance of the plan revision does not preclude the permittee from complying with all other applicable statutes, rules, regulations or ordinances which may have jurisdiction over the proposed activity, and obtaining a permit or approval prior to construction.

The revised stamped, approved stormwater management drawings will be released for construction by the Wilmington Planning Division under separate cover. Please replace any old plan sheets from the approved set with the new, revised sheet. An electronic copy of the approved drawing set, permit, application and supplementary documents will be maintained by the Wilmington Engineering Division. If you have any questions, or need additional information, please contact Eric Seidel at (910) 765-7461 or eric.seidel@wilmingtonnc.gov

Sincerely,

A handwritten signature in blue ink, appearing to read 'S. Cheatham'.

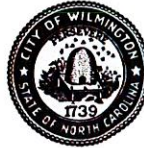
for Sterling Cheatham, City Manager
City of Wilmington

cc: Justin Bishop, PE Malpass Engineering & Surveying, PC
Josh Mihaly, PLLC Mihaly Land Design
Brian Chambers, Wilmington Development Services/Planning

SWP2013018 R2



* Unless otherwise Noted



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STORMWATER MANAGEMENT PERMIT APPLICATION FORM
(Form SWP 2.2)

I. GENERAL INFORMATION

1. Project Name (subdivision, facility, or establishment name - should be consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):

Evermore Apartments (Expansion & Rainbow Square)

2. Location of Project (street address):

1016 Bonham Avenue, 1022 Bonham Avenue, & 2309 Evermore Way, 3901 Wrightsville Ave.

City: Wilmington County: New Hanover Zip:

3. Directions to project (from nearest major intersection):

Travel approx. 0.26 miles north on NC-132 (S College Rd) from the intersection of NC-132 & US-76 (Oleander Dr). Turn left on

Wrightsville Ave & travel approx. 0.59 miles. Turn right on Bonham Ave & travel approx. 0.06 miles to site (west side of road).

II. PERMIT INFORMATION

1. Specify the type of project (check one): Low Density High Density
Drains to an Offsite Stormwater System Drainage Plan Other

If the project drains to an Offsite System, list the Stormwater Permit Number(s):

City of Wilmington: State - NCDENR/DWQ:

2. Is the project currently covered (whole or in part) by an existing City or State (NCDENR/DWQ) Stormwater Permit? Yes No

If yes, list all applicable Stormwater Permit Numbers:

City of Wilmington: 2013018 State - NCDENR/DWQ:

3. Additional Project Permit Requirements (check all applicable):

CAMA Major Sedimentation/Erosion Control

NPDES Industrial Stormwater 404/401 Permit: Proposed Impacts:

If any of these permits have already been acquired please provide the Project Name, Project/Permit Number, issue date and the type of each permit:

III. CONTACT INFORMATION

1. Print Applicant / Signing Official's name and title (specifically the developer, property owner, lessee, designated government official, individual, etc. who owns the project):

Applicant / Organization: Elevation Apartments LLC & Remarkable Properties, LLC

Signing Official & Title: Mark Maynard, Manager (Elevation Apartments LLC & Remarkable Properties, LLC)

- a. Contact information for Applicant / Signing Official:

Street Address: 10 S Cardinal Dr

City: Wilmington State: NC Zip: 28403

Phone: 910-251-5030 Fax: _____ Email: jr@tributecompanies.com

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

- b. Please check the appropriate box. The applicant listed above is:

- The property owner (Skip to item 3)
- Lessee* (Attach a copy of the lease agreement and complete items 2 and 2a below)
- Purchaser* (Attach a copy of the pending sales agreement and complete items 2 and 2a below)
- Developer* (Complete items 2 and 2a below.)

2. Print Property Owner's name and title below, if you are the lessee, purchaser, or developer. (This is the person who owns the property that the project is on.)

Property Owner / Organization: _____

Signing Official & Title: _____

- a. Contact information for Property Owner:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

3. (Optional) Print the name and title of another contact such as the project's construction supervisor or another person who can answer questions about the project:

Other Contact Person / Organization: _____

Signing Official & Title: _____

a. Contact information for person listed in item 3 above:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

IV. PROJECT INFORMATION

1. In the space provided below, briefly summarize how the stormwater runoff will be treated.
Stormwater runoff will be treated in two permeable pavement systems. This modification is to expand Permeable Pavement System #2 due to the expansion of the development. No changes are being made to Permeable Pavement System #1. Rainbow Square development is reducing impervious & is considered redevelopment.

- 2. Total Property Area: 175,248 square feet
- 3. Total Coastal Wetlands Area: 0 square feet
- 4. Total Surface Water Area: 0 square feet
- 5. Total Property Area (2) – Total Coastal Wetlands Area (3) – Total Surface Water Area (4) = Total Project Area: 175,248 square feet.
- 6. Existing Impervious Surface within Property Area: 68,703.79 square feet
- 7. Existing Impervious Surface to be Removed/Demolished: 8,053 square feet
- 8. Existing Impervious Surface to Remain: 60,650.79 square feet
- 9. Total Onsite (within property boundary) Newly Constructed Impervious Surface (*in square feet*):

Buildings/Lots	7,254
Impervious Pavement	269
Pervious Pavement (adj. total, with 100 % credit applied)	0
Impervious Sidewalks	2,155
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe) (wall, bicycle & HVAC pads, concrete patios, pool deck)	1,811
Future Development	0
Total Onsite Newly Constructed Impervious Surface	11,489

10. Total Onsite Impervious Surface
 (Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) = 72,139.79 square feet

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = 41.17 %

12. Total Offsite Newly Constructed Impervious Area (improvements made outside of property boundary, in square feet):

Impervious Pavement	758
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	1,474
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe)	0
Total Offsite Newly Constructed Impervious Surface	2,232

13. Total Newly Constructed Impervious Surface
 (Total Onsite + Offsite Newly Constructed Impervious Surface) = 13,721 square feet

14. Complete the following information for each Stormwater BMP drainage area. If there are more than three drainage areas in the project, attach an additional sheet with the information for each area provided in the same format as below. Low Density projects may omit this section and skip to Section V.

Basin Information	BMP #2A & 2B COMBINED IS SYSTEM #2		
	Pre 2017 Rules Perm. Pavement System #1 (existing) BMP # 1	Pre 2017 Rules Perm. Pavement System #2 (existing) BMP # 2A	Post 2017 rules Perm. Pavement System #2 (new expansion) BMP # 2B
Receiving Stream Name	Burnt Mill Creek	Burnt Mill Creek	Burnt Mill Creek
Receiving Stream Index Number	18-74-63-2	18-74-63-2	18-74-63-2
Stream Classification	C;Sw	C;Sw	C;Sw
Total Drainage Area (sf)	6,504.02	48,643	24,953
On-Site Drainage Area (sf)	6,504.02	48,643	24,953
Off-Site Drainage Area (sf)	0	0	0
Total Impervious Area (sf)	2,522.79*	27,330*	9,410
Buildings/Lots (sf)	0	16,258*	7,254
Impervious Pavement (sf)	623.15*	2,242*	243
Pervious Pavement (sf)	4,864.82* (1,216.21)	21,820* (5,455)	14,747** (0)
Impervious Sidewalks (sf)	683.43*	3,067*	1,847
Pervious Sidewalks (sf)	0	0	0
Other (sf)	0	308*	66
Future Development (sf)	0	0	0
Existing Impervious to remain (sf)	0	0	0
Offsite (sf)	0	0	0
Percent Impervious Area (%)	38.79	56.19	37.71

*Based on asbuilt condition; 75% pervious pavement credit for existing systems. **100% pervious pavement credit for new expansion.

15. How was the off-site impervious area listed above determined? Provide documentation:

N/A

V. SUBMITTAL REQUIREMENTS

1. Supplemental and Operation & Maintenance Forms - One applicable City of Wilmington Stormwater BMP supplement form and checklist must be submitted for **each** BMP specified for this project. One applicable proposed operation and maintenance (O&M) form must be submitted for **each type** of stormwater BMP. Once approved, the operation and maintenance forms must be referenced on the final plat and recorded with the register of deeds office.
2. Deed Restrictions and Restrictive Covenants - For all subdivisions, outparcels, and future development, the appropriate property restrictions and protective covenants are required to be recorded prior to the sale of any lot. Due to variability in lot sizes or the proposed BUA allocations, a table listing each lot number, lot size, and the allowable built-upon area must be provided as an attachment to the completed and notarized deed restriction form. The appropriate deed restrictions and protective covenants forms can be downloaded at the link listed in section V (3). Download the latest versions for each submittal.

In instances where the applicant is different than the property owner, it is the responsibility of the property owner to sign the deed restrictions and protective covenants form while the applicant is responsible for ensuring that the deed restrictions are recorded.

By the notarized signature(s) below, the permit holder(s) certify that the recorded property restrictions and protective covenants for this project, if required, shall include all the items required in the permit and listed on the forms available on the website, that the covenants will be binding on all parties and persons claiming under them, that they will run with the land, that the required covenants cannot be changed or deleted without concurrence from the City of Wilmington, and that they will be recorded prior to the sale of any lot.

3. Only complete application packages will be accepted and reviewed by the City. A complete package includes all of the items listed on the City Engineering Plan Review Checklist, including the fee. Copies of the Engineering Plan Review Checklist, all Forms, Deed Restrictions as well as detailed instructions on how to complete this application form may be downloaded from:

<http://www.wilmingtonnc.gov/PublicServices/Engineering/PlanReview/StormwaterPermits.aspx>

The complete application package should be submitted to the following address:

City of Wilmington – Engineering
Plan Review Section
212 Operations Center Dr
Wilmington, NC 28412

VI. CONSULTANT INFORMATION AND AUTHORIZATION

1. Applicant: Complete this section if you wish to designate authority to another individual and/or firm (such as a consulting engineer and /or firm) so that they may provide information on your behalf for this project (such as addressing requests for additional information).

Consulting Engineer: Justin C. Bishop, P.E.

Consulting Firm: Malpass Engineering & Surveying, P.C.

a. Contact information for consultant listed above:

Mailing Address: 1134 Shipyard Blvd

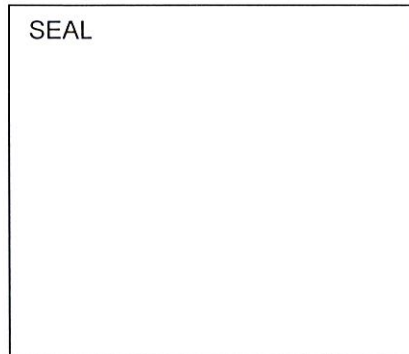
City: Wilmington State: NC Zip: 28412

Phone: 910-392-5243 Fax: 910-392-5203 Email: justinbishop@bizec.rr.com

VII. PROPERTY OWNER AUTHORIZATION (If Section III(2) has been filled out, complete this section)

I, *(print or type name of person listed in Contact Information, item 2)* _____, certify that I own the property identified in this permit application, and thus give permission to *(print or type name of person listed in Contact Information, item 1)* _____ with *(print or type name of organization listed in Contact Information, item 1)* _____ to develop the project as currently proposed. A copy of the lease agreement or pending property sales contract has been provided with the submittal, which indicates the party responsible for the operation and maintenance of the stormwater system.

As the legal property owner I acknowledge, understand, and agree by my signature below, that if my designated agent *(entity listed in Contact Information, item 1)* dissolves their company and/or cancels or defaults on their lease agreement, or pending sale, responsibility for compliance with the City of Wilmington Stormwater Permit reverts back to me, the property owner. As the property owner, it is my responsibility to notify the City of Wilmington immediately and submit a completed Name/Ownership Change Form within 30 days; otherwise I will be operating a stormwater treatment facility without a valid permit. I understand that the operation of a stormwater treatment facility without a valid permit is a violation of the City of Wilmington Municipal Code of Ordinances and may result in appropriate enforcement including the assessment of civil penalties.



Signature: _____

_____ Date: _____

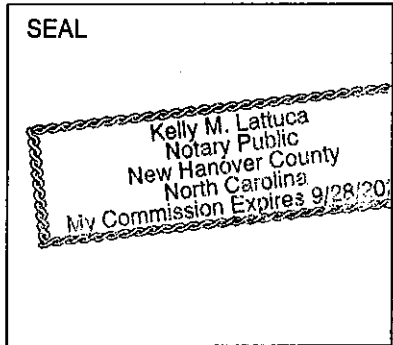
I, _____, a Notary Public for the State of _____, County of _____, do hereby certify that _____ personally appeared before me this day of _____, _____.

and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,

My commission expires: _____

VIII. APPLICANT'S CERTIFICATION

I, (print or type name of person listed in Contact Information, item 1) Mark Maynard certify that the information included on this permit application form is, to the best of my knowledge, correct and that the project will be constructed in conformance with the approved plans, that the required deed restrictions and protective covenants will be recorded, and that the proposed project complies with the requirements of the applicable stormwater rules under.



Signature: _____
Date: 2/22/19
Kelly M Lattuca, a Notary Public for the State of North Carolina county of New Hanover, do hereby certify that Mark L Maynard Jr personally appeared before me this day of 2/22/19 and acknowledge the due execution of the application for a stormwater

permit. Witness my hand and official seal,

Kelly M Lattuca
My commission expires: 9/28/20



STORMWATER MANAGEMENT PERMIT APPLICATION FORM
401 CERTIFICATION APPLICATION FORM
PERMEABLE PAVEMENT SUPPLEMENT



This form must be completely filled out, printed and submitted.
The Required Items Checklist (Part III) must be printed, filled out and submitted along with all of the required information.

I. PROJECT INFORMATION

Project Name	Evermore Apartments
Contact Person	Mark Maynard
Phone Number	910-251-5030
Date	5/21/2014
Drainage Area	1

II. DESIGN INFORMATION

Soils Report Summary

Hydrologic soil group (HSG) of subgrade	A
Infiltration rate	1.31 in/hr

Pavement Design Summary

Permeable Pavement (PP) design type	Infiltration - HSG A/B
SA of PP being proposed (A _p)	4,865 ft ²
Resulting BUA counted as impervious for main application form	1,216 ft ²
Adjacent BUA directed to PP (A _c)	1,307 ft ² OK
Ratio of A _c to A _p	0.27 (unitless)
Flow from pervious surfaces is directed away from PP?	Yes; except for
Design rainfall depth	1.5" in
Permeable pavement surface course type	PC
Layer 1 - Washed aggregate size (ex. No. 57)	No. 57
Layer 1 - Aggregate porosity (n)	0.40 (unitless) OK
Layer 2 - Washed aggregate size (ex. No. 57)	
Layer 2 - Aggregate porosity (n)	(unitless)
Minimum total aggregate depth for design rainfall (D _{wq})	4.8 in
Drawdown/infiltration time for D _{wq}	0.3 days OK
How is 10-yr, 24-hr storm handled?	bypassed
Aggregate depth to infiltrate 10-yr, 24-hr storm (D ₁₀)	
Drawdown/infiltration time of 10-yr, 24-hr storm	
Actual provided total aggregate depth	5.0 in OK
Top of aggregate base layer elevation	38.50 fmsl
Storage elevation of design rainfall depth	38.49 fmsl
Overflow elevation	39.00 fmsl
Bottom elevation at subgrade	38.09 fmsl
SHWT elevation	37.09 fmsl
Underdrain diameter	

BUA Credit for Permeable Pavement Footprint:
75% BUA Credit

OK

OK

Underdrain Required

N/A

OK

OK

in

fmsl

fmsl

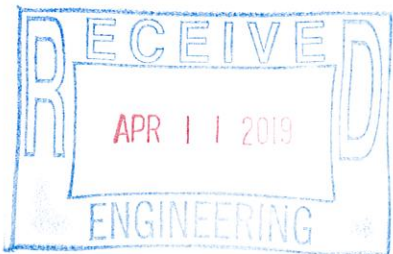
fmsl

fmsl

fmsl

in

except for a parking lot island + grassed area between back of curb + sidewalk



#REF!



Detention Systems (skip for infiltration systems)

Diameter of orifice	_____	in
Coefficient of discharge (C _d)	_____	(unitless)
Driving head (H _o)	_____	ft
Storage volume discharge rate (through discharge orifice)	_____	ft ³ /sec
Storage volume drawdown time	_____	days
Pre-development 1-yr, 24-hr peak flow	_____	ft ³ /sec
Post-development 1-yr, 24-hr peak flow	_____	ft ³ /sec

Additional Information

Slope of soil subgrade at bottom of permeable pavement	_____	0.50	%	OK
Slope of the permeable pavement surface	_____	1.00	%	OK
Construction sequence minimizes compaction to soils?	_____	Yes		OK
Subsoil preparation specified (must select one)	_____	scarified		
Meets industry standards for structural requirements?	_____			OK
<u>Washed</u> stone is specified for the aggregate?	_____	Yes		OK
Required signage specified on plans?	_____	Yes		OK
Number of observation wells provided	_____	1		OK
Distance to structure	_____	>20	ft	
Distance to surface waters	_____	>30	ft	OK
Distance to water supply well(s)	_____	>100	ft	OK

← To the best of our knowledge.

III. REQUIRED ITEMS CHECKLIST

Please indicate the page or plan sheet numbers where the supporting documentation can be found. **An incomplete submittal package will result in a request for additional information. This will delay final review and approval of the project.** Initial in the space provided to indicate the following design requirements have been met. If the applicant has designated an agent, the agent may initial below. **If a requirement has not been met, attach justification.**

	Initials	Page/ Plan Sheet No.
1. Plans (1" = 50' or larger) of the entire site showing: - Design at ultimate build-out, - Off-site drainage (if applicable), - Delineated drainage basins (include Rational C coefficient per basin), - Location of permeable pavement, - Roof and other surface flow directed away from permeable pavement, - Location of the permeable pavement sign(s).	<u>JCB</u>	<u>1, 3, 4, 9</u>
2. Section view of the permeable pavement (1" = 20' or larger) showing: - All layers (including details about the surface course), and - SHWT	<u>JCB</u>	<u>4, 7</u>
3. A detail of what the permeable pavement sign.	<u>JCB</u>	<u>7</u>
4. A site specific soils report that is based upon an actual field investigation, soil borings, and infiltration tests within the footprint of the proposed permeable pavement. The soils investigation shall state the infiltration rate, SHWT elevation, and information about any confining layers. County soil maps are not an acceptable source of soils information. (Projects in the WiRO - The results of the soils report must be verified in the field by DWQ, by completing & submitting the soils investigation request form.)	<u>JCB</u>	<u>See provided soils report.</u>
5. A construction sequence that shows how the permeable pavement will be protected from sediment until the entire drainage area is stabilized.	<u>JCB</u>	<u>7</u>
6. The supporting calculations.	<u>JCB</u>	<u>See provided calculations</u>
7. A copy of the signed and notarized operation and maintenance (O&M) agreement.	<u>JCB</u>	<u>See provided O+M Agreement</u>
8. A copy of the deed restrictions (if required).	<u>JCB</u>	<u>N/A</u>

SUPPLEMENT-EZ COVER PAGE

SWP2013018R2

FORMS LOADED

PROJECT INFORMATION		
1	Project Name	Evermore Apartments (Evermore Apartments Expansion)
2	Project Area (ac)	3.15
3	Coastal Wetland Area (ac)	0
4	Surface Water Area (ac)	0
5	Is this project High or Low Density?	High
6	Does this project use an off-site SCM?	No

COMPLIANCE WITH 02H .1003(4)		
7	Width of vegetated setbacks provided (feet)	N/A
8	Will the vegetated setback remain vegetated?	
9	Is BUA other than as listed in .1003(4)(c-d) out of the setback?	
10	Is streambank stabilization proposed on this project?	

NUMBER AND TYPE OF SCMs:		
11	Infiltration System	0
12	Bioretention Cell	0
13	Wet Pond	0
14	Stormwater Wetland	0
15	Permeable Pavement	2
16	Sand Filter	0
17	Rainwater Harvesting (RWH)	0
18	Green Roof	0
19	Level Spreader-Filter Strip (LS-FS)	0
20	Disconnected Impervious Surface (DIS)	0
21	Treatment Swale	0
22	Dry Pond	0
23	StormFilter	0
24	Silva Cell	0
25	Bayfilter	0
26	Filterra	0

Supplement for DA # 2 only.

← Only 1 system is being modified.

DA #1 previously permitted at 75% credit. SS

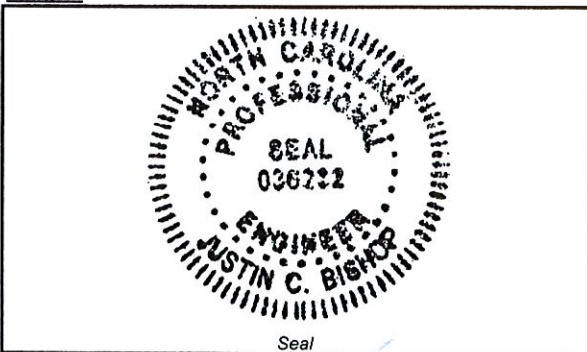
FORMS LOADED

DESIGNER CERTIFICATION		
27	Name and Title:	Justin C Bishop, P.E.
28	Organization:	Malpass Engineering & Surveying, P.C.
29	Street address:	1134 Shipyard Blvd
30	City, State, Zip:	Wilmington, NC 28412
31	Phone number(s):	910-392-5243
32	Email:	justinbishop@bizec.rr.com

Certification Statement:

I certify, under penalty of law that this Supplement-EZ form and all supporting information were prepared under my direction or supervision; that the information provided in the form is, to the best of my knowledge and belief, true, accurate, and complete; and that the engineering plans, specifications, operation and maintenance agreements and other supporting information are consistent with the information provided here.

Designer



Justin C. Bishop
Signature of Designer

3/18/19
Date



DRAINAGE AREAS

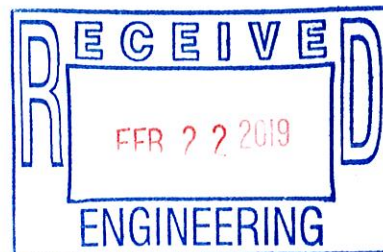
1	Is this a high density project?	Yes
2	If so, number of drainage areas/SCMs	2
3	Is all/part of this project subject to previous rule versions?	No

← Only drainage area #2 is being modified.

FORMS LOADED

DRAINAGE AREA INFORMATION		Entire Site	2
4	Type of SCM	N/A	Permeable Pavement
5	Total BUA in project (sq ft)		31,285 sf
6	New BUA on subdivided lots (subject to permitting) (sq ft)		
7	New BUA outside of subdivided lots (subject to permitting) (sf)		9,492 sf
8	Offsite - total area (sq ft)		
9	Offsite BUA (sq ft)		
10	Breakdown of new BUA outside subdivided lots:		
	- Parking (sq ft)		269 sf
	- Sidewalk (sq ft)		1,903 sf
	- Roof (sq ft)		7,254 sf
	- Roadway (sq ft)		
	- Future (sq ft)		
	- Other, please specify in the comment box below (sq ft)		66 sf
11	New infiltrating permeable pavement on subdivided lots (sq ft)		
12	New infiltrating permeable pavement outside of subdivided lots (sq ft)		14,926 sf
13	Existing BUA that will remain (not subject to permitting) (sq ft)		
14	Existing BUA that is already permitted (sq ft)		26,217 sf
15	Existing BUA that will be removed (sq ft)		784 sf
16	Percent BUA		91.40%
17	Design storm (inches)		1.5 in
18	Design volume of SCM (cu ft)		8,482 cf
19	Calculation method for design volume		Equation 1 in C-5 of NCDEQ Stormwater Design Manual

ADDITIONAL INFORMATION	
20	Please use this space to provide any additional information about the drainage area(s):
Item #10-Other is bicycle pad. Item #12 does not include 21,641 sf of ex. infiltrating permeable pavement. Item #15 includes ex. areas that remain on site, but do not drain to the system & are not included in the design. Existing BUA to system increased due to including roof overhang areas.	



PERMEABLE PAVEMENT

1	Drainage area number	2
2	Design volume of SCM (cu ft)	8482 cf
3	Area of permeable pavement to be installed (square feet)	36567 sf
4	Area of screened roof runoff that is directed to pavement (square feet)	23512 sf
5	Area of additional built-upon area runoff that is directed to pavement (square feet)	7773 sf
6	Area of incidental, unavoidable runoff from adjacent stable pervious areas (square feet)	5742 sf

GENERAL MDC FROM 02H .1050

7	Is the SCM sized to treat the SW from all surfaces at build-out?	Yes
8	Is the SCM located away from contaminated soils?	Yes
5	What are the side slopes of the SCM (H:V)?	
6	Does the SCM have retaining walls, gabion walls or other engineered side slopes?	No
7	Are the inlets, outlets, and receiving stream protected from erosion (10-year storm)?	Yes
8	Is there an overflow or bypass for inflow volume in excess of the design volume?	Yes
9	What is the method for dewatering the SCM for maintenance?	
10	If applicable, will the SCM be cleaned out after construction?	
11	Does the maintenance access comply with General MDC (8)?	Yes
12	Does the drainage easement comply with General MDC (9)?	Yes
13	If the SCM is on a single family lot, does (will?) the plat comply with General MDC (10)?	
14	Is there an O&M Agreement that complies with General MDC (11)?	Yes
15	Is there an O&M Plan that complies with General MDC (12)?	Yes
16	Does the SCM follow the device specific MDC?	Yes
17	Was the SCM designed by an NC licensed professional?	Yes

PERMEABLE PAVEMENT MDC FROM 02H .1055

18	Is this a detention or infiltration permeable pavement system?	Infiltration
19	Proposed slope of the subgrade surface (%)	0%
20	Are terraces or baffles provided?	Yes
21	SHWT elevation (fmsl)	32.26 & 32.73
22	Storage elevation of the design rainfall depth (fmsl)	
23	Will toxic pollutants be stored or handled on or near the permeable pavement?	No
24	Does the proposed pavement surface comply with .1055(6)?	Yes
25	Will runoff from pervious surfaces be directed away from the pavement?	Yes
26	Maximum adjacent area directed to a single point onto the permeable pavement (sq ft)	1000 sf
27	Is at least one observation well per terrace been provided at the low point(s)?	Yes
28	Have edge restraints been provided?	
29	Will the subgrade be graded when dry?	Yes
30	Will the permeable pavement be protected from sediment during construction?	Yes
31	Will an in-situ permeability test be conducted after site stabilization?	Yes

For Infiltrating Pavement Systems

32	Was the soil investigated in the footprint and at the elevation of the subgrade?	Yes
33	Soil infiltration rate (in/hr)	6.0 & 4.5
34	Is a detailed hydrogeologic study attached if the separation is between 1 and 2 feet?	
35	Is additional media being added to the soil profile?	No
36	Proposed slope of the subgrade surface (%)	0%
37	Top of the subgrade (bottom of the aggregate) (fmsl)	36.95 & 37.65
38	Dewatering time (hours)	5.52 hrs

For Detention Pavement Systems

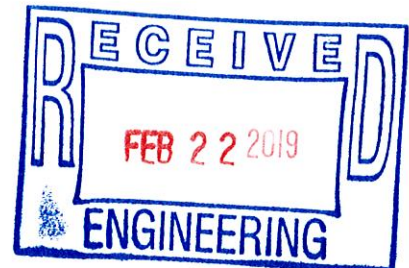
39	Drawdown time (hours)	
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Aggregate

40	Aggregate depth (in)	24.25 & 16.0
41	Aggregate porosity (n)	0.4
42	Size of aggregate to be used in the subbase	No. 57
43	Will the aggregate be washed?	Yes

ADDITIONAL INFORMATION

44	Please use this space to provide any additional information about the permeable pavement system(s): Item #3 is for the entire permeable pavement system (21,641 sf existing & 14,926 sf proposed). Items #19, 21, 22, 33, 36, 37, & 40 are for the expanded portion of the permeable pavement system (Sections #2 & 3 respectively).
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Operation & Maintenance Agreement

Project Name: Evermore Apartments Expansion
Project Location: 1016 & 1022 Bonham Avenue, & 2309 Evermore Way

Cover Page

Maintenance records shall be kept on the following BMP(s). This maintenance record shall be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired, or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the pollutant removal efficiency of the BMP(s).

The BMP(s) on this project include (check all that apply & corresponding O&M tables will be added automatically):

Bioretention Cell	Quantity:		Location(s):	
Dry Detention Basin	Quantity:		Location(s):	
Grassed Swale	Quantity:		Location(s):	
Green Roof	Quantity:		Location(s):	
Infiltration Basin	Quantity:		Location(s):	
Infiltration Trench	Quantity:		Location(s):	
Level Spreader/VFS	Quantity:		Location(s):	
Permeable Pavement	Quantity:	1	Location(s):	Parking adjacent to buildings
Proprietary System	Quantity:		Location(s):	
Rainwater Harvesting	Quantity:		Location(s):	
Sand Filter	Quantity:		Location(s):	
Stormwater Wetland	Quantity:		Location(s):	
Wet Detention Basin	Quantity:	0	Location(s):	
Disconnected Impervious Area	Present:	No	Location(s):	
User Defined BMP	Present:	No	Location(s):	

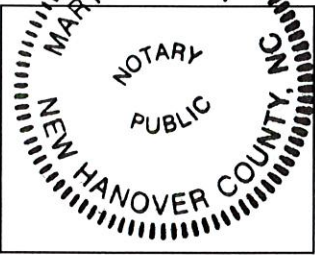
I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed for each BMP above, and attached O&M tables. I agree to notify NCDENR of any problems with the system or prior to any changes to the system or responsible party.

* Responsible Party:	Mark Maynard
Title & Organization:	Manager (Elevation Apartments LLC; Remarkable Properties, LLC)
Street address:	10 S. Cardinal Dr
City, state, zip:	Wilmington, NC 28403
Phone number(s):	910-251-5030
Email:	jr@tributecompanies.com

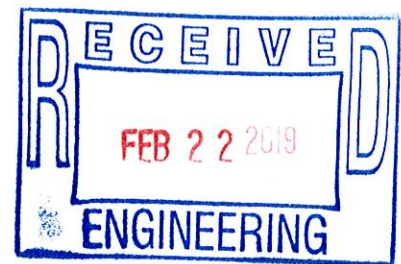
Signature: _____ Date: 3/15/19

I, Mary Douthit, a Notary Public for the State of North Carolina
 County of New Hanover, do hereby certify that Mark Maynard
 personally appeared before me this 13 day of March 2019 and
 acknowledge the due execution of the Operations and Maintenance Agreement.

Witness my hand and official seal, Mary Douthit



My commission expires 7-1-2020



Permeable Pavement Maintenance Requirements

At all times, the pavement shall be kept free of:

- Debris and particulate matter through frequent blowing that removes such debris, particularly during the fall and spring.
- Piles of soil, sand, mulch, building materials or other materials that could deposit particulates on the pavement.
- Piles of snow and ice.
- Chemicals of all kinds, including deicers.

The permeable pavement will be inspected **once a quarter**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the permeable pavement	Areas of bare soil and/or erosive gullies	Regrade the soil if necessary to remove the gully, then plant ground cover and water until established.
	A vegetated area drains toward the pavement.	Regrade the area so that it drains away from the pavement, then plant ground cover and water until established.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
The surface of the permeable pavement	Trash/debris present	Remove the trash/debris.
	Weeds	Do not pull the weeds (may pull out media as well). Spray them with a systemic herbicide such as glyphosate and then return within the week to remove them by hand. (Another option is to pour boiling water on them or steam them.)
	Sediment	Vacuum sweep the pavement.
	Rutting, cracking or slumping or damaged structure	Consult an appropriate professional.
Observation well	Water present more than five days after a storm event	Clean out clogged underdrain pipes. Consult an appropriate professional for clogged soil subgrade.
Educational sign	Missing or is damaged.	Replace the sign.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the local NC Department of Environment and Natural Resources Regional Office.

